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(54) Title: PROCESSES FOR PREPARING  $\beta$ -DIKETONE COMPOUND, METAL COMPLEX THEREOF AND METALLIC COMPOUND

(57) Abstract: Disclosed is a process for preparing a  $\beta$ -diketone compound such as 2,6-dimethyl-3,5-heptanedione, which comprises reacting an ester compound such as an alkyl isobutyrate with a ketone compound such as 3-methylbutanone in the presence of an alkali metal alkoxide as a catalyst. The process comprises a step 1 in which an ester compound  $CR^1R^2R^3COOQ$  is reacted with a ketone compound  $CR^4R^5R^6COCH_2R_7$  using an alkali metal alkoxide catalyst to give a  $\beta$ -diketone compound  $CR^1R^2R^3COCHR^4R^5R^6$ . (In the formulae,  $R^7$  is hydrogen or an alkyl group of 1 to 4 carbon atoms while others are each independently hydrogen or an alkyl group of 1 to 3 carbon atoms, and at least one of  $R^1$  to  $R^6$  is hydrogen.)